

IN THE CLAIMS:

Please cancel claims 1-6 and insert the following new claims 7-14 as follows:

428/402 87. Alumina hydrate particles having a composition represented by the general formula:



$$2 \times 10^{-4} \leq 10^{-4} \leq x \leq 25 \times 10^{-4}$$

$$0.1 \times 10^{-4} \leq y \leq 20 \times 10^{-4}$$

$$0.6 \leq z \leq 2.5$$

wherein M represents an alkali metal; when the alkali metal is in the form of M_2O , x is the number of moles thereof per mol of Al_2O_3 ; when ammonia is in the form of $(\text{NH}_4)_2\text{O}$, y is the number of moles thereof per mol of Al_2O_3 ; and z is the number of moles of hydration water (H_2O) per mol of Al_2O_3 ,

said alumina hydrate particles having:

an average particle diameter of 0.02 to 0.2 μm ,

a total pore volume of 0.5 to 1.5 ml/g, and

a volume of pores whose diameter is from 15 to 30 nm ranging from 0.3 to 1.0 ml/g.

423 98. A process for producing alumina hydrate particles, comprising the steps of:

neutralizing an aqueous solution of alkali metal aluminate or an aqueous solution of aluminum salt to thereby form an alumina hydrogel;

separating the alumina hydrogel by filtration, and washing the separated alumina hydrogel with water and/or aqueous ammonia;

adjusting the pH value of the washed alumina hydrogel so as to fall within the range of 9 to 12, and heating the alumina hydrogel at 50 to 105°C to thereby effect aging of the alumina hydrogel;

adding an acid to the alumina hydrogel so that the alumina hydrogel is deflocculated into an alumina hydrosol; and

drying the alumina hydrosol.

*AJ Cohn
C2S2* 10. An alumina hydrate particle dispersion sol comprising a dispersion of alumina hydrate particles in water, wherein said alumina hydrate particles have a composition represented by the general formula:



$$2 \times 10^{-4} \leq 10^{-4} \leq x \leq 25 \times 10^{-4}$$

$$0.1 \times 10^{-4} \leq y \leq 20 \times 10^{-4}$$

$$0.6 \leq z \leq 2.5$$

wherein M represents an alkali metal; when the alkali metal is in the form of M_2O , x is the number of moles thereof per mol of Al_2O_3 ; when ammonia is in the form of $(\text{NH}_4)_2\text{O}$, y is the number of moles thereof per mol of Al_2O_3 ; and z is the number of moles of hydration water (H_2O) per mol of Al_2O_3 ,

said alumina hydrate particles having:

an average particle diameter of 0.02 to 0.2 μm ,

a total pore volume of 0.5 to 1.5 ml/g, and

a volume of pores whose diameter is from 15 to 30 nm ranging from 0.3 to 1.0 ml/g.

11 10. The alumina hydrate particle dispersion sol as claimed in claim 9 having an absorbance (ABS) of 2.0 or less exhibited when the Al_2O_3 has a concentration of 20% by weight.

12 *16*
11. The alumina hydrate particle dispersion sol as claimed in claim *9*
having a viscosity of 50 to 2000 cP exhibited when the Al₂O₃ has a concentration of 20% by weight.

12 *17*
12. The alumina hydrate particle dispersion sol as claimed in claim *11*
having an absorbance (ABS) of 2.0 or less exhibited when the Al₂O₃ has a concentration of 20% by weight.

12 *18*
13. A coating liquid for forming an ink receptive layer, comprising:
alumina hydrate particles and a binder, wherein said particles and binder are dispersed in one of water or an organic solvent,
wherein the alumina hydrate particles have a composition represented by the general formula:



$$2 \times 10^{-4} \leq 10^{-4} \leq x \leq 25 \times 10^{-4}$$

$$0.1 \times 10^{-4} \leq y \leq 20 \times 10^{-4}$$

$$0.6 \leq z \leq 2.5$$

wherein M represents an alkali metal; when the alkali metal is in the form of M₂O, x is the number of moles thereof per mol of Al₂O₃; when ammonia is in the form of (NH₄)₂O, y is the number of moles thereof per mol of Al₂O₃; and z is the number of moles of hydration water (H₂O) per mol of Al₂O₃,

said alumina hydrate particles having:
an average particle diameter of 0.02 to 0.2 μm ,
a total pore volume of 0.5 to 1.5 ml/g, and
a volume of pores whose diameter is from 15 to 30 nm ranging from 0.3 to 1.0 ml/g.

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14. A recording sheet with ink receptive layer, comprising a substrate sheet having an ink receptive layer formed thereon from a coating liquid comprising:

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alumina hydrate particles and a binder, wherein said particles and binder are dispersed in one of water or an organic solvent,

wherein the alumina hydrate particles have a composition represented by the general formula:



$$2 \times 10^{-4} \leq 10^{-4} \leq x \leq 25 \times 10^{-4}$$

$$0.1 \times 10^{-4} \leq y \leq 20 \times 10^{-4}$$

$$0.6 \leq z \leq 2.5$$

wherein M represents an alkali metal; when the alkali metal is in the form of M_2O , x is the number of moles thereof per mol of Al_2O_3 ; when ammonia is in the form of $(\text{NH}_4)_2\text{O}$, y is the number of moles thereof per mol of Al_2O_3 ; and z is the number of moles of hydration water (H_2O) per mol of Al_2O_3 ,

said alumina hydrate particles having:

an average particle diameter of 0.02 to 0.2 μm ,

a total pore volume of 0.5 to 1.5 ml/g, and

a volume of pores whose diameter is from 15 to 30 nm ranging from 0.3 to 1.0 ml/g.